

Work Order ID 80567

80567

Page 1

February-23-12 11:20:35 AM

Item ID: D3954-7 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Ratchet Lug
 Start Date: 23/02/2012 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 08/03/2012 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: M.C.J. Date: 12/02/23 Tooling: Date: Run Start ***NR1***
 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3954	C								

100 0.00
100
 Mill Conv Memo
 Conventional Milling Machine mill to size
363 1" X 2" 1B12-3-4

110 0.00
110
 Waterjet Memo
 FLOW CNC Waterjet 1-Cut as per Dwg D3954
 Dwg Rev: C
 Prog Rev: C
 2-Deburr if necessary 1B12-3-4 (4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

80567

Page 2

N900040100

Setup Start *NS1*

Stop *NS2*

4

Cust Item ID:

4

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop ***NR2***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

0.00

120

QC Memo

0.00

Quality Control

125

0.00

125

Mill Conv	Memo
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	
80	
81	
82	
83	
84	
85	
86	
87	
88	
89	
90	
91	
92	
93	
94	
95	
96	
97	
98	
99	
100	

0.00

Conventional Milling Machine

127

QC2- Inspect parts off machine FAI/FAIB

0.00

127

QC Memo

0,00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 80567

80567

Page 3

February-23-12 11:20:35 AM

Item ID: D3954-7 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Ratchet Lug
 Start Date: 23/02/2012 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 08/03/2012 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130 QC8- Inspect parts - second check 0.00

130

QC

Quality Control

Memo

140 Spray Painting per QSI005 4.2 0.00

140

SprayPaint

Spray Painting

Memo

SPRAY PAINT YELLOW AS PER NOTE 2 ON DWG D3954 (PAGE 3)

12/04/02 Powder COAT Yellow

150 QC14- Inspect Spray Paint 0.00

150

QC

Quality Control

Memo

Start Time: 7:50 4X
 Temp: 320°F 400°F
 Finish Time: 8:20
 4x 4 U nls/lo

M 11632A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 80567

February-23-12 11:20:35 AM

80567

Page 4

Item ID: D3954-7 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Ratchet Lug
 Start Date: 23/02/2012 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 08/03/2012 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location: <u>ST097</u>	0.00							
160									
Packaging	Memo	0.00				(4)		B 12570	
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.00							
Quality Control									

12/5/10 *[Signature]*
 ME
 12-05-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

February-23-12 11:20:39 AM

Page 1

Work Order ID: 80567

80567

Parent Item: D3954-7

D3954-7

Parent Item Name: Ratchet Lug

Start Date: 23/02/2012

Required Date: 08/03/2012

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 11.08.16 AS PER REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303B1.000X2.000		Purchased	No			100	f	8.6839	0.5	2.105263			

M303B1 000X2 000

303 BAR 1" X 2"

**

BIZ-3-4

Location

Loc Qty

Loc Code

MAT050

8.6839

114899

8.6839

114899

4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

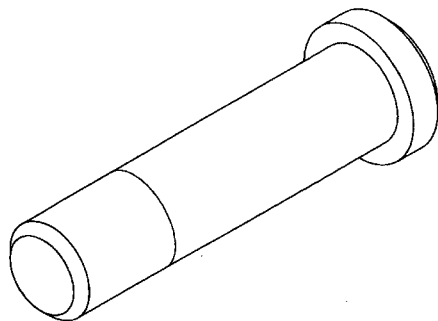
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

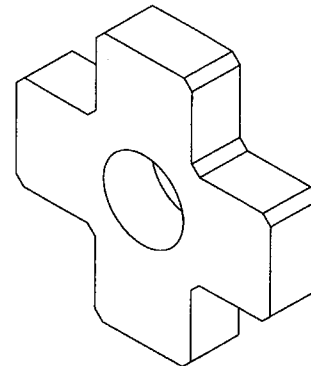
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

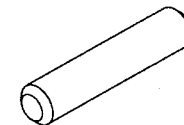
NOTE: Date & initial all entries



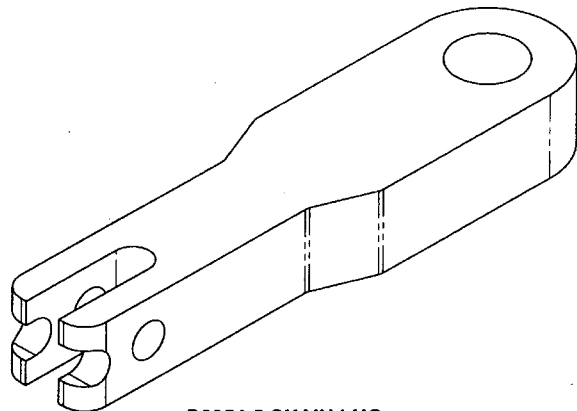
D3954-1 GWT PIN



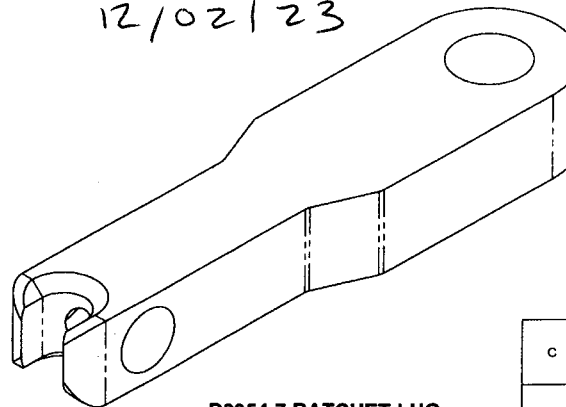
D3954-3 GWT KNOB



D3954-9 GWT CHAIN PIN



D3954-5 CHAIN LUG



D3954-7 RATCHET LUG

FOR COPY
RETURN TO
DART AEROSPACE
CHECKED COPY
WORK ORDER
NO. 80567 M.C.J
12/02/23

RELEASED
2011-07-29

C	MATERIAL UPDATE FOR D3954-1/-3: NOW STAINLESS STEEL ONLY (A8-2); FINISH CHANGED TO "NONE" FOR D3954-1/-3 (A8-2); TOLERANCE ON Ø0.750 WAS Ø0.75 MAX (D3-3 & D7-3); D3954-9 NOW A PURCHASED PART (A2/A8-3). REASON: PAR11-113.		MB	11.07.27
B	MATERIAL UPDATE FOR ALL COMPONENTS WAS STAINLESS STEEL IS CARBON STEEL FOR ALL COMPONENTS. FINISH FOR ALL COMPONENTS WAS RED POWDER COAT IS YELLOW SPRAY PAINT.		AJS	09.10.15
A	NEW ISSUE		AJS	09.05.26
REV.	DESCRIPTION		BY	DATE
DESIGN	AJS/DSTOW	DART AEROSPACE LTD		
DRAWN		HAWKESBURY, ONTARIO, CANADA		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C	
MFG. APPR.	<i>[Signature]</i>	D3954	SHEET 1 OF 3	
APPROVED	<i>[Signature]</i>	TITLE	SCALE	
DE APPR.	N/A	MISC MACHINED PARTS GWT KIT	NTS	
DATE	11.07.27	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		

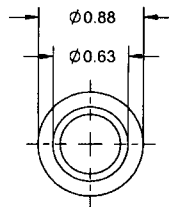
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

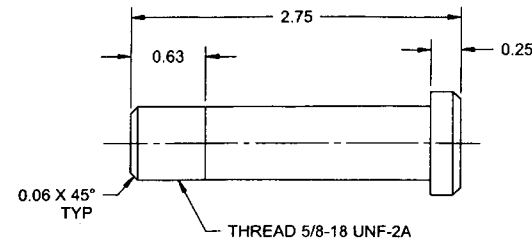
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

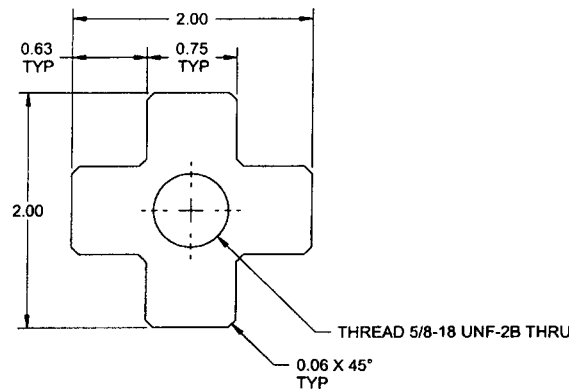
NOTE: Date & initial all entries



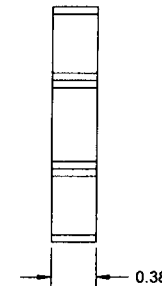
D3954-1 GWT PIN



80567



D3954-3 GWT KNOB



NOTES:

- 1) MATERIAL -1: AISI 303/304/316 STAINLESS STEEL ROUND BAR
PER ASTM A582 (303) OR ASTM A276 (304/316)
REF DART SPEC M303R OR M304R
-3: AISI 303/304/316 STAINLESS STEEL SHEET
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316)
OR ASTM A240 OR ASME SA240
REF DART SPEC M303S OR M304S
OR:
AISI 303/304/316 STAINLESS STEEL BAR OR AISI 304/316 PLATE
PER ASTM A582 (303) OR A276 (304/316) OR ASTM A240 (304/316)
REF DART SPEC M303B OR M304B

- 2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3954-X" USING FINE POINT PERMANENT INK MARKER
7) WEIGHT -1: 0.26 lbs
-3: 0.23 lbs

RELEASED
2011-07-29

DESIGN	AJS/DSTOW	DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D3954	REV. C
MFG. APPR.			SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.	N/A	MISC MACHINED PARTS GWT KIT	NTS
DATE	11.07.27	<small>COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

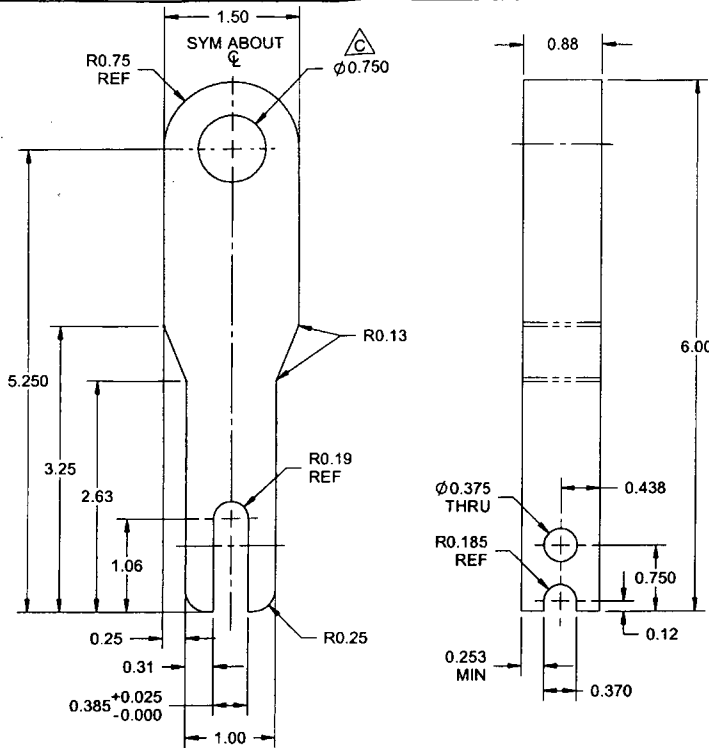
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

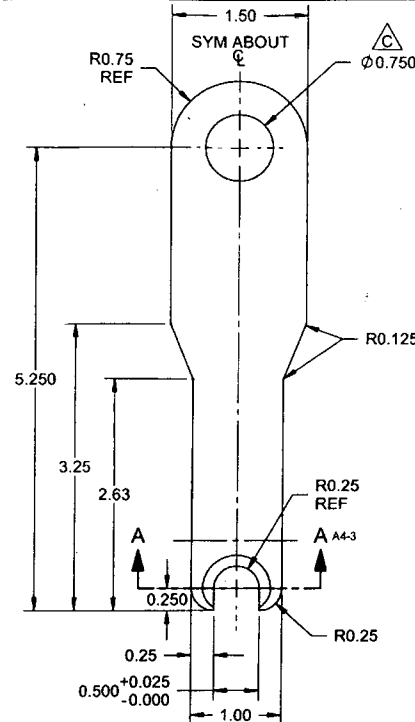
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

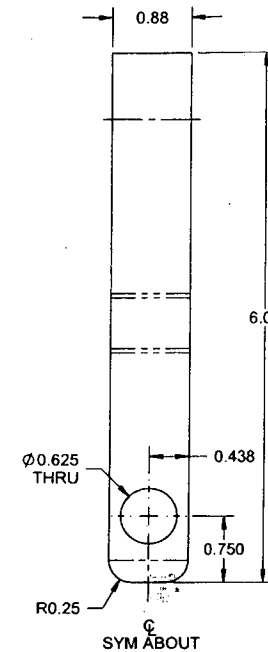
NOTE: Date & initial all entries



D3954-5 CHAIN LUG



D3954-7 RATCHET LUG



D3954-9 GWT CHAIN PIN

NOTES:

1) MATERIAL:

-5/-7: AISI 1010-1025 MILD STEEL BAR
PER DART SPEC M1010-B

-9: PURCHASE PART FROM MCMASTER-CARR:
P/N 98381A630 (MILD STEEL)

ALTERNATE MATERIAL:

-5/-7: AISI 303/304/316 STAINLESS STEEL BAR OR AISI 304/316 PLATE
PER ASTM A582 (303) OR A276 (304/316) OR ASTM A240 (304/316)
REF DART SPEC M303B OR M304B

-9: PURCHASE PART FROM MCMASTER-CARR:
P/N 90145A630 (STAINLESS STEEL)

2) FINISH -7 ONLY: SPRAY PAINT YELLOW WITH BERTRAND CGT031B PER DART QSI 005 4.2

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

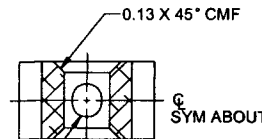
4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

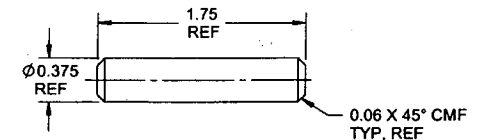
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3954-X" USING FINE POINT PERMANENT INK MARKER

7) WEIGHT -5/-7: 1.56 lbs EACH

-9: 0.05 lbs REF



SECTION A-A C3-3



DESIGN	AJS/DETOW	DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED	AJS	DRAWING NO.	REV. C
MFG. APPR.		D3954	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.	N/A	MISC MACHINED PARTS GWT KIT	NTS
DATE	11.07.27	<small>COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

RELEASED
2011-07-29

80567

12.04.06 WALL BREAK THRU ACCEPTABLE
QSI 018
POWDER COAT YELLOW HS 112.12
PER DART QSI 005 4.3.5.12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries